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Taris, T.W.

published in
The Journal of Psychology
1998

DOI (link to publisher)
10.1080/00223989809599265

document version
Publisher's PDF, also known as Version of record

citation for published version (APA)
Taris, T. W. (1998). Fertility in the Netherlands as an expected-value process, and developmental readiness. *The Journal of Psychology*, *132*, 61-77. https://doi.org/10.1080/00223989809599265

The Journal of Psychology, 1998, *132*(1), 61–77

Fertility in the Netherlands as an Expected Value Process and Developmental Readiness

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ABSTRACT. In this 2-wave panel study, the decision to have children was examined in the context of Feather's (1982) expectancy-value model among a representative sample of 288 childless Dutch adults aged 18–30 years. The effects of 2 indicators of developmental readiness (age and duration of relationship) were also explored. It was expected that (a) the likelihood of having a baby would increase as a function of intentions, evaluations of being childless, and expected rewards of having children and (b) developmental readiness would be positively related to whether respondents had children at the 2nd wave of the study. Structural equation modeling was used. The results largely supported expectations. Developmental readiness affected fertility both directly and indirectly via the expected rewards of having children.

ONE IMPORTANT DECISION young people in the West face today is whether to have children. Because family planning devices are widely available, the great majority of children born in Western countries are both wanted and planned (Jones, Darroch Forrest, Goldman, Henshaw, & Lincoln, 1986). Because getting pregnant is an active rather than a passive event, family formation can be construed as a rational choice process in which intentions, motivations, and expected costs and rewards are important predictors of behavior (cf. Bagozzi & Van Loo, 1991; Bracher & Santow, 1991; Miller, 1992).

In this study I extended previous research in this field in two ways. First, using longitudinal data on 288 Dutch adults aged 18–30 years, I tested a structural equations model that links characteristics of the state of being childless,

This research was supported by a grant from the Dutch Organization for Scientific Research, Grant PGS 56-381.

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using as measures the expected costs and rewards of having a baby, satisfaction with the state of being childless, and the intention to have a baby (all measured at Time 1), to fertility (as observed 4 years later). Although the studies cited above are relevant to parts of such a model, none presented an integrated model of fertility behavior; the precise structure of the psychological process that leads to the decision to have children is, therefore, largely unknown.

Second, I examined this process with special reference to a key concept in sociology and demography, namely, developmental readiness (Hagestad & Neugarten, 1985). Many life events are assumed to occur only if a person is ready for them. For example, age and length of steady dating (two indicators of developmental readiness) are related to union formation behavior (Liefbroer, Gerritsen, & De Jong-Gierveld, 1994). It is unclear, however, how the effects of such variables are mediated by intentions and attitudes. Therefore, in the current study I explored how developmental readiness relates to the variables linked with the decision to have children.

Relationships Among the Evaluation of Being Childless, Attitudes, and Having a Baby

Feather's (1982, 1992) value-expectancy theory holds that reaching a particular goal (a behavior, an alternative situation) is determined by the intention to reach that goal. This intention is influenced by the perceived chances of success in realizing the desired goal and the evaluation of the current situation. The evaluation of the current situation is in turn determined by the features of the current situation and the rewards perceived to result from realizing the desired goal. Finally, the features of the current situation affect the perceived rewards of the alternative situation.

My application of Feather's (1982) theory to family formation led to the following expectations. I hypothesized that having a baby is dependent on the intention to have a baby; the more one intends to have a baby, the more likely it becomes that one will have a baby. Note that this effect requires access to effective contraception; that is, one must be able to control the occurrence of a particular outcome (Ajzen & Madden, 1986)—a precondition that is satisfied in many Western countries, but possibly not elsewhere.

The intention to have a baby is affected by (a) a person's evaluation of his or her current state of being childless (if one considers the current state of being childless as negative, one will try harder to have a baby; dissatisfaction thus feeds the will to improve one's situation) and (b) the perception of the chances of success. In the context of fertility, this concept can be operationalized as the perceived feasibility of reaching the alternative situation of having a baby; possible hindrances are infertility of self or partner or having a partner who does not (yet) want to have children.

A person's evaluation of the state of being childless is determined by the features of that state (including the freedom he or she enjoys or the amount of con-

tacts with friends and acquaintances) and by the expected rewards of having a baby, relative to the characteristics of the current state of being childless. The expected costs and rewards of having a baby can be assessed by examining the expected consequences of having a baby, weighted by the importance the person attaches to these consequences. For example, having a baby may have important consequences regarding leisure time, contacts with friends and acquaintances, financial situation, and so forth. However, rewards or costs occur only to the degree to which a particular aspect is judged as important.

Finally, the expected rewards of having a baby are lower (i.e., the costs are higher) if the current state of being childless is considered as positive (in terms of leisure time, contacts with friends and acquaintances, and the like). A positive evaluation of the current situation is likely to reduce the expected rewards of having a baby (any change in the situation is likely to make things worse; the opportunity for improvement is limited).

Costs and Rewards of Having Children

Costs

Having children has costs and rewards. As the (childless) male leading character in Steven Spielberg's movie *Jurassic Park* remarks after being asked what he thinks is so wrong with kids, "They're noisy. They're messy. They're expensive. They smell" (Crichton & Koepp, 1992). It seems likely that many people share such ideas about the "costs" of having children. For one thing, child rearing is an expensive matter indeed. Rauch (1989) estimated that the cost of raising a child reaches about $100,000 by the time the child is 18. Apart from bringing about direct costs (for food, day care, toys, and the like), having children also results in indirect costs. Chief among these is that having children leads to an increase in women's workloads (Berk & Berk, 1979), thus limiting their career opportunities. Indeed, many women leave the labor market when they have children (Felmlee, 1993; Taris, 1996).

But having children also has costs that cannot be quantified easily in financial terms. For example, previous research consistently has shown that having children results in a decline in marital satisfaction and an increase in marital conflict (Glenn, 1990), possibly because having children means that people have little time left for their partners and themselves. Thus, the myth that having children improves marriage (LeMasters & DeFrain, 1989) is untrue.

Rewards

Although the common belief that having children increases the quality of the marital relationship is in fact wrong, many people still believe that having children is good for a relationship. Thus, one (perceived) reward of having children is that

children improve the quality of the relationship. In addition, parenthood itself is considered rewarding. According to a Gallup survey (Gallup & Newport, 1990), 93% of the parents surveyed said they would do it all over again. The greatest benefits of having children were the love and affection they bring (12%); the pleasure of watching them grow (11%); and the joy, fun, and happiness they bring (10%).

All in all, it seems the reasons against having children (the costs) are more clear-cut than the reasons for having children (the rewards). Having children means that little time for self, friends, career, and relationship is left and that finances become significantly worse (Kalmuss, Davidson, & Kushman, 1992). Reasons for having children are that children are expected to improve the quality of the partner relationship and that parenting simply is fun.

Developmental Readiness: Age and Duration of Relationship

Whether or not a person decides to have a baby is related to the extent to which he or she feels ready to do so. Clausen (1986) distinguished among a biological, a psychological, and a sociological component of what may be termed *developmental readiness*. Biologically, there is a limit to the period during which women can have children (about age 35; Bird & Melville, 1994). Thus, age would be expected to be an important predictor of the decision to have children: The fact that older women have less time left to have children would probably be responsible for a positive association between age and having a baby, at least for the current sample of 18–30-year-olds.

However, the psychological and the sociological components are probably at least equally important. According to Hagestad and Neugarten (1985), life events can take place at times that are considered normal ("on time") but also too early or too late ("off time"). This results in the emergence of age-specific expectation patterns, based on the "average" behavior within a certain reference group (Marini, 1984). For example, Cooney, Pedersen, Indelicato, and Palkovitz (1993) considered the ages between 23 and 30 as "on time" for fatherhood among American males. In addition, even if a person was willing to undergo a particular life event (such as having children) early, it might be difficult to realize this intention. His or her partner might not yet be willing, or significant others (parents, friends) might not be enthusiastic about these plans, resulting in external social pressure not to pursue the goal (Liefbroer et al., 1994). Having a baby at too late a time is probably also difficult because of the same social pressures, but here the limit to having babies becomes increasingly important (this applies to a lesser degree to males).

Duration of Relationship

Having a baby is a dyadic event. Childbirth usually occurs within the realm of a steady partner relationship, that is, a relationship that has reached the stage at which the partners form a union, either married or unmarried (Bird & Melville,

1994). However, having a baby does not occur at just any stage of a steady relationship. The duration of the relationship is related to the odds that one will become a parent. During the first years after marriage, the odds of having a first baby increase (Lillard & Waite, 1993) and then decrease. This suggests that partners become convinced of each other's intentions and of the quality and stability of their relationship during the first years of a relationship; only then do they seriously consider having children. After some time, most people wanting to have a baby will have realized this intention, resulting in a decrease of the chances of having a first baby. Because Dutch women on average have their first baby at age 30, it seemed unlikely that I would observe the decreasing part of this relationship in this sample of 18–30-year-olds. Thus, I expected a positive relation between duration of relationship and childbirth.

Developmental Readiness and the Decision to Have Children

Although it seems reasonable to expect positive correlations between duration of relationship and age on the one hand and having children on the other, little is known regarding the effects of the first set of variables on fertility. Because social-psychological theory holds that the impact of distal factors, such as socioeconomic status (SES), age, gender, and the like, on the occurrence of a particular phenomenon is usually mediated by attitudes and behavioral intentions (proximate variables), age and duration of relationship would be expected to affect some—or all—of the variables in the decision-theoretical framework outlined above. Because there is no theoretical guidance as to how these variables fit into the model, I chose to take a rather exploratory stance and did not advance any specific hypotheses before performing the study. Rather, I expected that developmental readiness would affect the variables in the model (a general hypothesis).

Strong and weak versions of this hypothesis can be formulated. The strong version holds that the relation between developmental readiness and fertility is fully mediated by decision-theoretical variables. Thus, direct effects of age and duration of relationship on fertility should be absent when the variables in the decision-theoretical framework are held constant. A weaker formulation of the same hypothesis would be that at least part of the effect of age and duration of relationship is accounted for by the variables in the decision-theoretical framework. That is, the indicators of developmental readiness may affect childbirth directly, but there will be at least some indirect paths between these variables and fertility.

Method

Sample

The data were collected as part of a broad longitudinal panel study with two waves (1987 and 1991). The respondents were 1,775 Dutch adults aged 18–30

years. During the first wave, trained interviewers used a standardized questionnaire to interview them about their behavior and attitudes with regard to several life domains, including fertility. The respondents also completed a questionnaire that assessed background variables. The sample was stratified on the basis of gender and age. About half were male (49.5%), and the birth cohorts 1961, 1965, and 1969 were equally represented. The majority (71%, $n = 1,257$) also participated in the second wave, in which the procedure and instruments used were the same as in the first wave. Analysis of the nonresponse showed that it was unrelated to gender, age, SES, and the like, but that better educated respondents were slightly overrepresented. Comparison of the scores of the respondents who dropped out with the scores of those who remained in the study did not reveal significant differences regarding the variables in this study.

Bird and Melville (1994) and Taris (1996) revealed that having a baby occurs almost exclusively within the realm of a steady partner relationship, at least for respondents beyond their teens. Thus, I restricted the sample to the 312 heterosexual respondents who were living with a partner at the time of the first wave and who were still childless. Also, the three respondents who were infertile, or whose partner was infertile, were excluded from the sample. After listwise deletion of missing values, the final sample size was 288 respondents.

Variables

Features of the current state of being childless. The respondents indicated on a 5-point Likert-type scale ranging from *very little* (1) to *very much* (5) the degree to which particular factors were currently present in their lives. Attention was given to eight features: the freedom to decide what to do and how to do it, the amount of money they could spend according to their own likes, the attention they could give to their careers, the amount of contact with friends and acquaintances, the amount of leisure time spent according to their own likes, the appreciation received from others in their environment for the things they do, the feeling of having a sense of purpose in life, and the quality of their relationship with their partner. The reliability (Cronbach's alpha) of this scale was .62. The first five features were presumed to decrease after the birth of a baby (thus representing the costs of having a baby), and the remaining three represented possible rewards of having a baby.

Perceived costs/rewards of having a baby. The respondents indicated on a 5-point Likert-type scale ranging from *much less* (−2), *about the same* (0), to *much more* (2), changes in the eight features that would occur if they were to have a baby; for example, whether they would receive more or less appreciation from others in their environment. The responses were weighted by the importance the respondent attached to each factor on a scale ranging from 1 (*not important*) to 5 (*very important*). Thus, if a respondent believed that an important factor would

decrease strongly upon having a baby, this resulted in a loss due to having a baby. On the other hand, if an important factor would increase, this led to an increase of the rewards of having a baby.

If a respondent judged a particular factor to be unimportant, it hardly mattered whether advantages or disadvantages were perceived; the rewards or costs of having a baby were in this respect neutral. The overall expected rewards (or costs) of having a baby, relative to the current situation of being childless, were computed by summing the weighted expected consequences regarding all eight features. A high score meant that having a baby was expected to lead to a considerable improvement over the situation of being childless.

Evaluation of the current state of being childless. This variable tapped satisfaction with the current state of being childless by means of four 5-point items: (a) "How do you feel about not having children? How satisfied or dissatisfied are you with that?"; (b) "How satisfied or dissatisfied are you with your current state of being childless?" (1 = *very dissatisfied*, 5 = *very satisfied*); (c) "My life is perfect in most respects"; and (d) "All in all, I am satisfied with my life" (1 = *strongly disagree*, 5 = *strongly agree*). Exploratory factor analysis showed that one factor accounted for 62% of the total variance. The reliability of this scale was .73.

Perceived chances of having a baby. Within the theoretical framework I employed, the perceived chance of success (to have a baby) is an important determinant of fertility. This variable can be thought of as referring to the perceived influence of external factors that might impede reaching the alternative situation. In the current application, this variable could be affected by the fertility desires of the partner; for example, the other person involved may not yet want to have children (note that infertile respondents were omitted from the sample).

Feather (1992) noted that past failure to find the expected effects of "expected success" may have been due to the use of measures calibrated at too general a level. Consistent with his recommendation, the perceived chances of success were operationalized by means of two items that specifically referred to the chances that a person would have children: "How likely do you think it is that you will ever have children?" (1 = *very unlikely*, 5 = *very likely*), and "How does your partner feel about having a baby?" (1 = *partner would certainly not have a baby*, 5 = *partner would certainly have a baby*). The correlation between both items was .69, and the mean of these two items was computed to indicate the presence of factors that could prevent having children.

Intention to have a baby. This variable was measured with a single item asking whether the respondent wanted to have children within 4 years after the first interview of the study was completed.

Having a baby. This dichotomous variable indicated whether the respondent had had a baby during the 4 years after the first interview (high = yes).

Developmental readiness. Consistent with earlier operationalizations of this concept (e.g., Liefbroer et al., 1994), I used age and duration of relationship (in years) as indicators of developmental readiness. All variables, except the outcome variable, were measured at the first wave of the study. The means, standard deviations, and correlations among the variables are presented in Table 1.

Specification and Fitting of the Model

I used structural equation modeling (Jöreskog & Sörbom, 1993) to test the hypotheses. The model as initially specified could not be retained, $\chi^2(9, N = 288) = 39.37$, $p < .01$, AGFI = .88, NNFI = .65. Inspection of the modification indices showed that the perceived chances of having a baby did not have a direct effect on the perceptions of the costs/rewards of having a baby. (Taris, Heesink, and Feij, 1995, reported a similar effect in the context of unemployment.) Because I believed that this effect could be easily interpreted, it was added to the model.

After stepwise deletion of the nonsignificant paths, the model could be retained empirically, $\chi^2(14, N = 288) = 16.81$, $p = .27$, AGFI = .97, NNFI = .98. I then tested for significant differences between the variance–covariance matrices of the men and women in the sample, thus checking whether gender moderated the relations between the variables in the model. This was not the case, $\chi^2(56, N = 288) = 49.81$, $p > .80$; hence, there was no need to estimate the model for men and women separately.

Results

In Figure 1 the standardized least squares estimates for the effects in the final model are shown in the form of a path diagram. As expected, having a baby at Time 2 was strongly and positively dependent on the intention to have a baby (an effect of .48, $p < .001$). This intention was negatively related to the evaluation of the current state of being childless and positively related to the perceived chances of success in trying to realize the alternative situation. The evaluation of the current state of being childless was negatively related to the perceived costs/rewards of having a baby (−.29) and positively related to the features of the current situation (.21).

The results diverged from the theoretical model in that the features of the current situation affected the perceived rewards of having a baby positively and not negatively as I initially expected. Thus, if the respondents' current situations contained little opportunity to spend money according to their own likes, to give attention to their career, and so forth, they believed that having children would result in a major loss (especially considering that the average perceived rewards of having children were negative; cf. Table 1). If the respondents' situations con-

TABLE 1
Means, Correlations, and Standard Deviations for the Variables

Variable	1	2	3	4	5	6	7	8	9
1. Has child at Time 2 (high = yes)	—	.54	−.11	.13	.06	.15	−.02	.13	.27
2. Intention to have children within next 4 years		—	−.33	.11	−.08	.40	.10	−.18	.17
3. Evaluation of being childless			—	−.25	.14	−.09	.01	.03	.03
4. Expected rewards of having children				—	.21	.21	.20	.19	−.06
5. Features of current situation					—	.12	−.04	.06	.04
6. Chance of having children						—	.04	−.09	.16
7. Sex (high = male)							—	.17	.08
8. Duration of relationship (years)								—	.42
9. Age of subject									—
M	.46	.69	4.07	−4.52	3.91	3.70	.44	2.52	23.76
SD	.50	.46	1.11	2.09	.37	.81	.50	1.25	2.01

Note. Correlations of .12 and over are significant at $p = .05$ (two-tailed) or better.

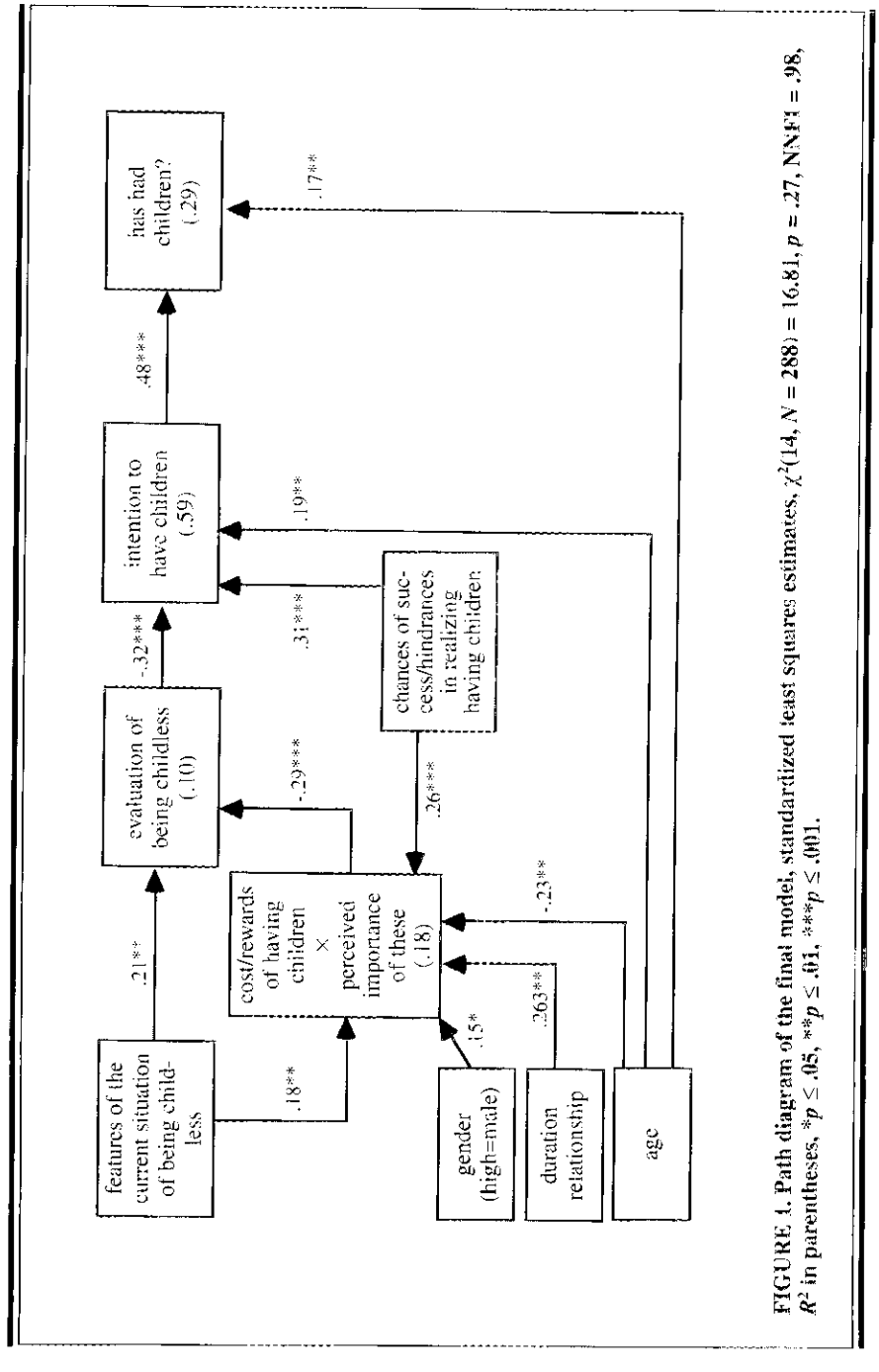

FIGURE 1. Path diagram of the final model, standardized least squares estimates, $\chi^2(14, N = 288) = 16.81$, $p = .27$, NNFI = .98, R^2 in parentheses, $*p \leq .05$, $**p \leq .01$, $***p \leq .001$.

tained plenty of such aspects, having children was expected to result in much lower costs (or even in a net gain).

The perceived chances of success in having a baby were positively related to the perceived rewards of having a baby (.26). Thus, if respondents were optimistic about their chances of having children, they saw relatively much to be gained from this transition.

Finally, women expected fewer rewards (more costs) of having a baby than did men (a small but significant standardized effect of .15)—which is probably correct, because usually women bear the primary responsibility for children.

Developmental Readiness

Older respondents were more likely to have experienced childbirth (an effect of .17; $p < .01$). They were also more likely, at Time 1, to intend to have children within the next 4 years (a standardized effect of .19, $p < .01$). Also, both indicators of developmental readiness (age and duration of relationship) were related to the expected costs/rewards of having a baby. The nature of this relationship was different, however. Whereas the perceived rewards of having children increased with duration of relationship (as was expected), age affected the expected rewards negatively; older respondents saw less to be gained and more to be lost by having children. Inspection of the correlation matrix revealed that the direction of the latter effect was in accordance with the sign of the correlation between age and expected rewards; thus, it is implausible that this finding was due to a suppressor effect.

To enhance understanding of the relation between the expected costs/rewards of having a baby and developmental readiness, I conducted two post hoc MANOVAs. In the first I examined how duration of relationship was related to the perceived costs/rewards of having children and the relevance of these. The sample was divided into two groups of about equal size: respondents whose union was established less than 2 years ago and respondents whose union was established at least 2 years ago.

Furthermore, the index representing the costs/rewards of having children was disassembled into its constituent items. The average of the five cost factors formed one scale and the average of the three reward factors another; the two corresponding relevance scales were also entered in the analysis. Thus, this analysis enabled me to examine whether the two groups differed with respect to the relative costs and rewards they attached to having children and the weights they attached to the costs and rewards. A similar MANOVA was performed with age substituted for duration of relationship, with the oldest birth cohort (1961) constituting one group and the two other cohorts (1965 and 1969) constituting the other. The results of these analyses are presented in Table 2.

Duration of relationship. The overall F test indicated that the two groups were significantly different on at least one of the four variables, $F(4, 282) = 4.12$, $p <$

.01. The univariate results revealed that the two groups agreed with respect to the importance of the costs and rewards of having a baby. However, the respondents whose current union had been formed 2 or more years ago saw more rewards and fewer costs to having children than the respondents whose union had been formed less than 2 years ago. Hence, the positive effect between the total costs/rewards of having children and duration of relationship was the result of differential expectancies regarding the costs and rewards of having children, and not of differences concerning the importance of these.

Age. Again, there were significant differences between the older and the younger respondents, $F(4, 282) = 8.95$, $p < .01$. The univariate results revealed that the two groups differed with respect to the importance of the expected costs and rewards of having children, but not regarding the expected costs/rewards. The older age group expected slightly more rewards than the younger birth cohorts, but because these rewards were considered to be less important, the net gain was considerably lower for the older birth cohort than for the younger birth cohorts. The same applied for the costs. Again, the estimates of the costs were about the same for both groups, but because the oldest age group judged these costs as more important than the younger age groups did, this resulted in a net loss from having children. Taken together, the oldest age group saw less to be gained and more to be lost from having children than the younger age groups did, resulting in a negative effect of age on the expected net rewards.

Total effects of age and duration of relationship on fertility behavior. With regard to the total effects of the two indicators of developmental readiness, it must be acknowledged that the total effect of age on fertility (i.e., the weighted sum of the direct and the indirect paths that connect age to fertility) was much larger than the total effect of duration of relationship (.25 vs. .01, respectively). This is because age also affected fertility directly, whereas the effect of duration of relationship ran via indirect paths only. This may be taken to mean that, although including duration of relationship helps in understanding the process that leads to the decision to have children, it is not of major importance in predicting whether or not a person will have children. Age alone already accounted for 8% of the variance in fertility behavior; inclusion of the rational choice variables (including duration of relationship) raised this estimate to 29%.

Discussion

In the current study I applied the Feather (1982) expectancy-value model to the decision to have children. This decision was considered the outcome of a rational choice process, during which the costs and rewards of having a baby would be judged on the basis of the features of the current situation; the perceived rewards of having a baby relative to features of the current situation would

TABLE 2
Means and Standard Deviations of the Sample on Perceived Costs and Rewards of Having a Baby and Their Importance, Split According to Duration of Relationship and Age

Variable	Duration of relationship			Birth cohort		
	Less than 2 years (n = 141)	2 years or more (n = 147)	F[a]	1961 (n = 141)	1965/1969 (n = 147)	F[a]
Costs						
M	−1.01	−.91	3.89*	−.94	−.92	.07
SD	.43	.43		.43	.43	
Importance of costs						
M	3.81	3.72	2.24	3.80	3.68	4.62*
SD	.53	.49		.50	.49	
Rewards						
M	.41	.55	7.08**	.47	.42	1.06
SD	.41	.48		.42	.45	
Importance of rewards						
M	4.21	4.13	1.90	4.05	4.25	12.54**
SD	.48	.50		.52	.45	

[a]All Fs had 1, 286 degrees of freedom.
*$p < .05$. **$p < .01$.

lead to a lower satisfaction with being childless, which in turn would result in a positive intention to have a baby, and, ultimately, having a baby. I also explored how developmental readiness fitted into this framework.

The results largely supported the expectancy-value theory. One interesting difference was that the features of the current situation of being childless related positively, rather than negatively, to the perceived rewards of having a baby. That is, a negative evaluation of the current situation of being childless increased the likelihood that a person would believe that having a baby would result in a loss. Having children thus seemed to make things even worse when things already were bad, whereas this was less so when the current situation contained many positive aspects. Below I offer two interpretations of this result.

In the first interpretation, I acknowledge that Feather's expectancy-value theory (1982) has been developed to explain how people decide to induce changes in their lives in general. However, it seems to have been applied mainly in situations in which a transition occurs from a situation that is commonly seen as negative to a more positive alternative situation (especially the transition from unemployment to employment; Feather, 1990, 1992; Feather & O'Brien, 1987; Taris et al., 1995). In such cases a negative correlation between the features of the current situation and the expected rewards of an alternative situation would be expected: Things can hardly get worse when a person is unemployed, and finding a job can only result in an improvement of a person's condition.

However, the decision to have children is different. First, as noted previously, raising children requires a considerable investment of parents in time, money, and career opportunities; the reasons for having children are intangible (Gallup & Newport, 1992). Second, for the younger respondents in the sample the transition to parenthood may occur too early ("off time"). Finally, the state of being childless may not be a particularly negative state, certainly not given the ages of the respondents. Thus, in this case—where the costs of the transition of interest may well be large, and the "origin state" is not a negative state—a positive rather than a negative effect may well be plausible. Hence, the difference between the expected and the observed result may be because models may be valid in one particular domain, but not in another (the "ecological validity" or "field-specificness" of theories).

A second interpretation of the unexpected effect between the features of the current state of being childless and the expected rewards of having a baby is that a certain level of prosperity (in both a material and an immaterial sense) is a necessary precondition in order to offer self and children good (or at least acceptable) living conditions. Because having children means that some aspects of a person's situation will become less positive, he or she must first have ascertained that these costs can be met (this will certainly apply to the costs of having children). If such "assets" are not present, however, having children may lead to a very unpleasant situation, because a person will wind up below the minimally acceptable level of prosperity. Thus, the costs of having children have far more

severe implications for people whose current situation of being childless is not very positive than for people whose situation is relatively good: If there is more than enough, a little less of everything does no harm.

My second aim in this study was to explore how developmental readiness related to the decision to have children. The results revealed that the two commonly used indicators of this concept—age and duration of relationship—affected this process in a rather different way. Duration of relationship had only indirect effects upon fertility, via the expected costs/rewards of having children; thus, here the strong hypothesis was supported.

However, the other indicator of developmental readiness---age—affected the expected rewards of having children negatively. Older respondents saw less to be gained and more to be lost from having children. This was due mainly to the importance they attached to the costs and rewards of having children. Hence, the two indicators have differential effects on the expected rewards of having a baby. However, the positive effect of duration of relationship is stronger than the negative effect of age (standardized effects of .26 vs. –.23; when both effects are unstandardized, the difference becomes even larger, .45 vs. –.24). As an interesting consequence, the expected rewards of having children become greater over time, but only very slowly. Indeed, people who start their relationship at a relatively late age may never expect the same rewards of having children as others, at least not while they are still able biologically to have children.

However, although age has an indirect negative effect on fertility, it strongly and positively affects fertility directly, thus more than compensating for this negative indirect effect. This means that the effect of age on fertility is not fully accounted for by the theoretical model (i.e., the strong hypothesis that the effects of age would be mediated fully through the other variables in the model does not hold).

In effect, older people are more likely to have children, despite the fact that the rewards of having children are considerably lower for older than for younger people. This fact suggests that the decision to have children is only partly guided by the rational considerations included in the model. One possible explanation is that people decide to have children simply because the biological limit to having children is approaching. Perhaps inclusion of a measure of the subjective time that is left to have children would be sufficient to account for the direct effect of age upon fertility. However, this study did not include such a measure, and therefore only additional research can provide evidence as to whether this interpretation is correct.

All in all, this study provides sufficient evidence to conclude that the decision to have children is at least partly guided by rational considerations. Developmental readiness, as operationalized by age and duration of relationship, proved to be a somewhat ambiguous concept. Its indicators, however, were systematically related to one of the key variables in the model (i.e., the perceived rewards of having children). Thus, it appears that the positive relations between age and duration of relationship on the one hand, and fertility on the other, can

at least partly be understood as the result of a rational choice process in which the net rewards of having children increase over time, thus providing additional insight into the structure of this process.

REFERENCES

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology, 22,* 453–474.

Bagozzi, R. P., & Van Loo, M. F. (1991). A purposeful theory of work and family size decisions. In J. J. Siegers, J. de Jong-Gierveld, & E. van Imhoff (Eds.), *Female labour market behaviour and fertility: A rational-choice approach* (pp. 101–129). Berlin: Springer.

Berk, R. A., & Berk, S. F. (1979). *Labor and leisure at home: Content and organization of the household day.* Beverly Hills, CA: Sage.

Bird, G., & Melville, K. (1994). *Families and intimate relationships.* New York: McGraw-Hill.

Bracher, M., & Santow, G. (1991). Fertility desires and fertility outcomes. *Journal of the Australian Population Association, 97,* 33–49.

Clausen, J. A. (1986). *The life course: A sociological perspective.* Englewood Cliffs, NJ: Prentice-Hall.

Cooney, T. M., Pedersen, F. A., Indelicato, S., & Palkovitz, R. (1993). Timing of fatherhood: Is "on time" optimal? *Journal of Marriage and the Family, 55,* 205–215.

Crichton, M., & Koepp, D. (1992). *Jurassic Park* [Film].

Feather, N. T. (1982). *Expectations and actions. Expectancy-value models in psychology.* Hillsdale, NJ: Erlbaum.

Feather, N. T. (1990). *The psychological impact of unemployment.* New York: Springer Verlag.

Feather, N. T. (1992). Expectancy-value theory and unemployment effects. *Journal of Occupational and Organizational Psychology, 65,* 315–330.

Feather, N. T., & O'Brien, G. W. (1987). Looking for employment: An expectancy-valence analysis of job-seeking behaviour among young people. *Journal of Occupational Psychology, 78,* 251–272.

Felmlee, D. H. (1993). The dynamic interdependence of women's employment and fertility. *Social Science Research, 22,* 333–360.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research.* Reading, MA: Addison-Wesley.

Gallup, G. H., & Newport, F. (1990). Virtually all adults want children, but many of the reasons are intangible. *The Gallup Poll Monthly, 297,* 8–22.

Glenn, N. D. (1990). Quantitative research on marital quality in the 1980s: A critical review. *Journal of Marriage and the Family, 52,* 818–831.

Hagestad, G. O., & Neugarten, B. L. (1985). Age and the life course. In R. H. Binstock & E. Shanas (Eds.), *Handbook of aging and the social sciences* (Vol. 2, pp. 35–61). New York: Van Nostrand Reinhold.

Jones, E. F., Darroch Forrest, J., Goldman, N., Henshaw, S., & Lincoln, R. (1986). *Teenage pregnancy in industrialized countries.* New Haven, CT: Yale University Press.

Jöreskog, K. G., & Sörbom, D. (1993). *LISREL-8* [Computer manual]. Chicago: Scientific Software.

Kalmuss, D., Davidson, A., & Cushman, L. (1992). Parenting expectations, experiences, and the adjustment to parenthood: A test of the violated expectations framework. *Journal of Marriage and the Family, 54,* 516–526.

LeMasters, E. E., & DeFrain, J. (1989). *Parents in contemporary America.* New York: Wadsworth.

Liefbroer, A. C., Gerritsen, L., & De Jong-Gierveld, J. (1994). The influence of intentions and life course factors on union formation behavior of young adults. *Journal of Marriage and the Family, 56,* 193–203.

Lillard, L. A., & Waite, L. J. (1993). A joint model of marital childbearing and marital disruption. *Demography, 30,* 653–681.

Marini, M. M. (1984). Age and sequencing norms in the transition to adulthood. *Social Forces, 63,* 229–244.

Miller, W. B. (1992). Personality traits and developmental experiences as antecedents of childbearing motivation. *Demography, 29,* 265–285.

Rauch, J. (1989). Kids as capital. *Atlantic Monthly, 264,* 56–61.

Taris, T. W. (1996). *Reconsidering the relations between female employment and fertility: Having children, full-time, and part-time employment.* Manuscript submitted for publication.

Taris, T. W., Heesink, J. A. M., & Feij, J. A. (1995). The evaluation of unemployment, job-searching behavior, and finding a job: A longitudinal study. *The Journal of Psychology, 129,* 301–314.

Received March 22, 1996